

UNITED STATES
DEPARTMENT OF
AGRICULTURE

Animal and Plant Health Inspection Service

National Wildlife Research Center



# **Management of Blackbird Damage to Rice**

Contact Information:
John Cummings, Wildlife Services Research Wildlife Biologist
NWRC Headquarters
4101 LaPorte Avenue
Fort Collins, CO 80521

Phone: (970) 266-6131 FAX: (970) 266-6138

E-mail: john.l.cummings@aphis.usda.gov Web site: www.aphis.usda.gov/ws/nwrc

## National Wildlife Research Center Scientists Address Blackbird Damage to Rice

Wildlife Services' (WS) National Wildlife Research Center (NWRC) is the only Federal research facility devoted exclusively to resolving conflicts between people and wildlife through the development of effective, selective, and acceptable methods, tools, and techniques.

Blackbirds, specifically red-winged blackbirds, common grackles, and brown-headed cowbirds, cause extensive damage to newly planted rice and ripening rice. Blackbird damage to rice crops has received much attention in States such as Louisiana, Texas, California, Arkansas, Mississippi, and Missouri. Considerable public interest now exists to find better management methods to reduce damage caused by blackbirds.

NWRC's research focuses on reducing bird damage to rice and improving profitability for growers. To achieve these goals, NWRC must develop new and improved management techniques and



strategies while expanding partnerships between rice producers, rice commodity groups, rice research boards, universities, and local, State and Federal agencies. NWRC researchers are currently looking at the status of blackbird populations in southern rice-growing States and evaluating the impact of birds on rice crops. In addition, researchers are developing a bird repellant for use on rice and creating new strategies and tools to manage bird damage to rice.

### **Major Research Accomplishments:**

- WS evaluated the efficacy of an anthraquinone-based blackbird repellant for use on rice seed and on maturing panicles to reduce blackbird damage to ripening rice.
- WS evaluated alternative baiting strategies for the effective and safe delivery of DRC-1339, a toxicant used to manage depredating blackbird populations.
- WS determined residue levels of DRC-1339 in soil and plants following applications of the bait for blackbird management.
- WS determined the potential hazards of DRC-1339 to non-target bird species.
- WS determined the movements and distribution of blackbird populations causing damage to rice crops in Louisiana.
- WS evaluated the response of American coots to rice seed treated with an anthraquinone-based bird repellant.

# Applying Science and Expertise to Wildlife Challenges

**Blackbird Population Modeling**—A database of current information about the number, size, location, and species composition of winter blackbird roosts in the southern United States is helping to formulate region-specific plans to manage blackbird damage in several rice-growing States. The database also contains information about the population status, movements, and roosting locations of blackbirds and waterbirds.

**Economic Assessment of Damage**—A survey of rice producers in the major rice-producing States of Louisiana, Arkansas, Texas, California, and Missouri is being conducted to define the extent of blackbird damage, clarify economic losses associated with bird depredation, and assess the costs associated with reducing damage. The survey will help determine the direction damage management and research should move in the future.

### **Groups Affected By This Problem:**

- Rice producers
- Consumers of rice products
- Processors, manufacturers, suppliers and sellers of rice products
- Other crop farmers

**Chemical Repellants**—NWRC scientists are collecting data to identify, develop, and evaluate chemical repellants for reducing bird damage to newly planted and ripening rice. This data will support the development of new or amended labels for registration of bird repellants to protect seeded and headed rice.

#### Selected Publications:

- Cummings, J.L., P.A. Pochop, R.M. Engeman, J.E. Davis Jr., and T.M. Primus. 2002. Evaluation of Flight Control to reduce blackbird damage to newly planted rice in Louisiana. International Biodeterioration & Biodegradation 49:169-173.
- Glahn, J.F. and M.L. Avery. 2001. Estimation of red-winged blackbird mortality from toxic bait application. Chapter 8 in J.J. Johnston (ed). Pesticides and Wildlife. American Chemical Society Symposium Series 771. American Chemical Society, Washington, D.C. pp. 109-118.
- Avery, M.L., E.A. Tillman, J.S. Humphrey, J.L. Cummings, D.L. York, and J.E. Davis, Jr. 2000. Evaluation of overspraying as an alternative to seed treatment for application of flight control bird repellent to newly planted rice. Crop Protection 19:225-230.
- Avery, M.L., D.A. Whisson and D.B. Marcum. 2000. Responses of blackbirds to mature wild rice treated with flight control bird repellent. Proceedings of 19th Vertebrate Pest Conference, March 6-9, 2000, San Diego, CA. pp. 26-30.
- Cummings, J.L., J.F. Glahn, E. Allen Wilson, J.E. Davis, Jr. 2002. Potential hazards of DRC-1339 treated rice to non-target birds when used at roost staging areas in Louisiana to reduce local populations of depredating blackbirds. International Biodeterioration and Biodegradation 49:185-188.